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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/950,445 10/15/97 KEJHA

J JBK-6

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PM82/1227

EXAMINER

VANAMAN, F

ART UNIT

PAPER NUMBER

3611

10

DATE MAILED:

12/27/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/950,445

Applicant(s)
Kejha

Examiner
Frank Vanaman

Group Art Unit
3611



☒ Responsive to communication(s) filed on Oct 12, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-33 is/are pending in the application.

Of the above, claim(s) 1-9 and 13-33 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 10-12 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on Oct 12, 1999 is ☐ approved ☒ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Status of Application

1. Applicant's amendment, filed Oct. 12, 1999 has been entered in the application. Claims 1-33 are pending, claims 1-9 and 13-33 having been withdrawn from consideration as directed to non-elected inventions, claim 34 having been canceled. An Office action on the merits of claims 10-12 follows.
2. Two changes requested by applicant's amendment to the specification have not been entered as requested. The request to enter -a- on line 24 of page 19 has not been entered because no particular location is specified. The request to make certain changes to line 4 of page 23 has been entered instead on line 5 of that page in view of both "and" and "said" appearing on that line.

Drawings

3. The proposed drawing correction filed on Oct. 12, 1999 has been disapproved because it is not in the form of a pen-and-ink sketch showing changes *in red ink or with the changes otherwise highlighted*. See MPEP § 608.02(v).

Claim Rejections - 35 USC § 112

4. The claim rejections set forth in the previous office action have been withdrawn in view of applicant's amendments to claims 10-12, and further in view of applicant's comments, particularly as set forth in pages 12 and 13 of the amendment filed Oct. 12, 1999.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over West (US 3,517,766) in view of Laumann et al. (cited by applicant), and Thompson et al. (US 3,554,311). West teaches a vehicle having a body (1) an internal combustion engine (14) which is not sealed

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from the atmosphere, a pair of generators (16, 17) driven by the engine, a battery (10) connected to the generators and motor (11), the electric motor (11) connected to both the battery and generators, the motor for driving the vehicle, wherein the vehicle is further provided with a steering system (6, 7).

The reference of West fails to teach the internal combustion engine as being powered by hydrogen obtained through the electrolysis of water wherein the electrolysis element is further connected to the battery and generator. Laumann et al. teach a hydrogen fuel system for an internal combustion engine (24) which in turn drives a generator (22) wherein hydrogen gas is provided as the primary fuel (as opposed to a supplement to an existing petroleum fuel source) for the engine from an electrolysis device (26) fed from a water supply (27) and from an electric energy source (12). It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the conventional internal combustion engine taught by West with the hydrogen fueled engine and hydrogen supply source taught by Laumann et al. for the purpose of greatly reducing the exhaust emissions from the vehicle even while the engine is operating.

The references of West and Laumann et al. fail to explicitly teach the electric supply of the electrolysis device to be connected to both the generator and battery. In view of the provision of both a battery and generators on the vehicle of West, and the interconnections between both the battery and the generators and the motor of West, it would have been obvious to one of ordinary skill in the art at the time of the invention to connect both the generators and the battery of West to be operative to supply electric energy to the electrolysis device for the purpose of insuring the production of hydrogen fuel may be accomplished either while the engine is operating (i.e., through current supplied from at least one generator) or when the vehicle is stopped (i.e., through current supplied from the battery).

The reference of West as modified by Laumann et al. fails to teach the system as being applicable to a vehicle which rides on two wheels. Thompson et al. teach a two wheeled vehicle (wheels 4, 6) having a steering system (10, 12, 14) and a plurality of batteries (42, 44) for driving

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an electric drive motor (46). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the vehicle hydrogen/oxygen fuel source, engine, generators, and drive motors of West as modified by Laumann et al. in a two-wheeled configuration as taught by Thompson et al. for the purpose of providing a resulting small electric-powered recreational vehicle which does not require connection to an outside power source for the replenishment of its batteries, facilitating a greater vehicle range.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over West (US 3,517,766) in view of Laumann et al. (cited by applicant), Munday (US 5,143,025) and Thompson et al. (US 3,554,311). West teaches a vehicle having a body, an internal combustion engine which is not sealed from the atmosphere, a pair of generators driven by the engine, a battery connected to the generators and motor, the electric motor connected to both the battery and generators, the motor for driving the vehicle, wherein the vehicle is further provided with a steering system.

The reference of West fails to teach the internal combustion engine as being powered by hydrogen obtained through the electrolysis of water wherein the electrolysis element is further connected to the battery and generator. Laumann et al. teach a hydrogen fuel system for an internal combustion engine which in turn drives a generator wherein hydrogen gas is provided as the primary fuel (as opposed to a supplement to an existing petroleum fuel source) for the engine from an electrolysis device fed from a water supply and from an electric energy source. It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the conventional internal combustion engine taught by West with the hydrogen fueled engine and hydrogen supply source taught by Laumann et al. for the purpose of greatly reducing the exhaust emissions from the vehicle even while the engine is operating.

The references of West and Laumann et al. fail to explicitly teach the electric supply of the electrolysis device to be connected to both the generator and battery. In view of the provision of

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both a battery and generators on the vehicle of West, and the interconnections between both the battery and the generators and the motor of West, it would have been obvious to one of ordinary skill in the art at the time of the invention to connect both the generators and the battery of West to be operative to supply electric energy to the electrolysis device for the purpose of insuring the production of hydrogen fuel may be accomplished either while the engine is operating (i.e., through current supplied from at least one generator) or when the vehicle is stopped (i.e., through current supplied from the battery).

The reference of West as modified by Laumann et al. fails to teach the production of hydrogen on demand, the hydrogen not being stored. Munday teaches a hydrogen generating system for an engine (10) wherein an electrolysis apparatus (10) is employed to generate hydrogen and oxygen gases (in 36, 40) on demand to power the engine in response to the operation of a control pedal (figures 12-18, col. 5, line 59 to col. 7, line 13). It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the electrolysis device and storage system taught by the modifying reference of Laumann et al. as applied to the West reference with an on-demand hydrogen and oxygen generating device as taught by Munday for the purpose of eliminating any hazards associated with the storage of hydrogen and oxygen gases.

The reference of West as modified by Laumann et al. and Munday fails to teach the system as being applicable to a vehicle which rides on two wheels. Thompson et al. teach a two wheeled vehicle having a steering system and a plurality of batteries for driving an electric drive motor. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the vehicle hydrogen/oxygen fuel source, engine, generators, and drive motors of West as modified by Laumann et al. and Munday in a two-wheeled configuration as taught by Thompson et al. for the purpose of providing a resulting small electric-powered recreational vehicle which does not require connection to an outside power source for the replenishment of its batteries, facilitating a greater vehicle range.

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8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over West (US 3,517,766) in view of Laumann et al. (cited by applicant). West teaches a vehicle having a body, an internal combustion engine which is not sealed from the atmosphere, a pair of generators driven by the engine, a battery connected to the generators and motor, the electric motor connected to both the battery and generators, the motor for driving the vehicle, wherein the vehicle is further provided with a steering system.

The reference of West fails to teach the internal combustion engine as being powered by hydrogen obtained through the electrolysis of water wherein the electrolysis element is further connected to the battery and generator. Laumann et al. teach a hydrogen fuel system for an internal combustion engine which in turn drives a generator wherein hydrogen gas is provided as primary fuel (as opposed to a supplement to an existing petroleum fuel source) for the engine from an electrolysis device fed from a water supply and from an electric energy source. It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the conventional internal combustion engine taught by West with the hydrogen fueled engine and hydrogen supply source taught by Laumann et al. for the purpose of greatly reducing the exhaust emissions from the vehicle even while the engine is operating.

The references of West and Laumann et al. fail to explicitly teach the electric supply of the electrolysis device to be connected to both the generator and battery. In view of the provision of both a battery and generators on the vehicle of West, and the interconnections between both the battery and the generators and the motor of West, it would have been obvious to one of ordinary skill in the art at the time of the invention to connect both the generators and the battery of West to be operative to supply electric energy to the electrolysis device for the purpose of insuring the production of hydrogen fuel may be accomplished either while the engine is operating (i.e., through current supplied from at least one generator) or when the vehicle is stopped (i.e., through current supplied from the battery).

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Response to Arguments

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that the references must explicitly provide a suggestion for combining, a conclusion of obviousness may be made from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference (see *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969)), with skill being presumed on the part of the artisan, rather than the lack thereof (see *In re Sovish* 769 F.2d 738, 742, 226 USPQ 771, 774 (Fed. Cir. 1985)).

The examiner agrees that the West reference fails to teach the provision of a hydrogen fueled engine, and it is for this reason that the Laumann et al. reference has been employed in combination, as Laumann teaches the use of a hydrogen-fueled engine for the purpose of reducing pollution (note Laumann col. 1, lines 27-30), and the combination set forth replaces West's internal combustion engine with the hydrogen-fueled engine and hydrogen generation system of Laumann et al. for the purpose of reducing emissions, as specifically set forth in Laumann et al. The Thompson et al. reference has been relied upon for the express teaching of a low- or no-emission vehicle which runs on two wheels.

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As regards the various interconnections with the electrolysis device and batteries and/or a generator, it is not considered beyond the skill of the ordinary practitioner in the art to allow both generators and batteries in hybrid vehicles to power an electrical device, the generator being functional, for example when an engine is running (or when the generator is in use to generate a braking force), the batteries being functional, for example, when the engine is not running but the electrical device is in operation.

Conclusion

9. Applicant is reminded that claims 1-9 and 13-33 are withdrawn from consideration and have not been treated in this office action.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mufford et al. (US 5,991,670, filed 01/1997; 12/1995) teach a power control system for a vehicle, including a fuel cell system.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Vanaman whose telephone number is (703) 308-0424. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-1113.

Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, DC 20231

or faxed to :

(703) 305-3597 or 305-7687 (for formal communications intended for entry;
informal or draft communications may be faxed to the same number but should be
clearly labeled "UNOFFICIAL" or "DRAFT")

FRANK B. VANAMAN
Patent Examiner
Art Unit 3611

Frank Vanaman
December 20, 1999

FBV
12/20/99

J. J. Swann

J. J. SWANN
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